

REMARKS

I. Status and Disposition of the Claims

Prior to the above amendment, claims 1-21 were pending. In the present Office Action, claims 14-21 are withdrawn from consideration by the Examiner as being drawn to a non-elected invention. Office Action at 2. Thus, the Examiner considered claims 1-13 on the merits.

By the above amendment, claim 1 now incorporates the limitations of previously claims 4 and 12. Accordingly, claims 4 and 12 are cancelled without prejudice or disclaimer. Claims 3 and 7 are amended above to more clearly define the claimed invention. Claim 10 is amended to correct a minor typographical error. Claims 22-35 are new. Support for the above amendments and the new claims may be found in the as-filed specification and claims. Accordingly, the above amendments and new claims raise no issue of new matter.

Claim 10 is objected to by the Examiner for informalities. Office Action, page 2. Claims 1, 2, 5, 8, 9, and 11-13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0140794 A1 ("Asano"). *Id.* at pages 3-5. Claims 3, 4, 7 and 10 stand rejected under §103(a) as being unpatentable over Asano in view of U.S. Patent No. 6,152,030 ("Fuqua"). *Id.* at 5, 6. Finally, claim 6 stands rejected under §103(a) as being unpatentable over Asano in view of U.S. Patent No. 6,084,609 ("Manini"). *Id.* at 6, 7. Applicants respectfully disagree with and traverse the each of these rejections for at least the following reasons.

II. Arguments

a. The objection to claim 10 is moot

In the Office Action, the Examiner objects to claim 10. *Id.* at 2. In response, Applicants have amended claim 10 to replace the term “heads” with “head.” In view of this amendment, the Examiner’s objection to this claim is now moot, and should be withdrawn.

b. §103(a) rejection over Asano

Claims 1, 2, 5, 8, 9, and 11-13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Asano. *Id.* at 3-5. Insofar as this rejection applies to claim 12 it is moot, as claim 12 is amended herein.

To establish a prima facie case of obviousness under 35 U.S.C. §103(a), the Examiner must show that three basic criteria have been met. See M.P.E.P. § 2143. Specifically, the Examiner must establish that: (1) the prior art teaches or suggests all of the claim limitations; (2) there is some teaching or suggestion in the prior art to make the modification; and (3) one of ordinary skill in the art would have had a reasonable expectation of success in making the asserted modification. *Id.* As discussed in detail below, the Examiner has failed to establish any of these three criteria with respect to the present claims.

Present claim 1 recites, *inter alia*,

An image recording device, comprising...a second recording head which discharges a second ink for a second image forming process...wherein the second image forming process is a process for a background, and a layer of the second ink has a transmission density not less than 0.15 or an L value not less than 65.

Claim 1. Asano does not disclose an image recording device comprising each of these features.

Asano discloses

an ink jet recording apparatus that includes a plurality of ink jet heads, each of which ejects ink droplets of a different kinds of ink that can be cured by irradiation of energy toward a recording medium, a carriage that is movable with respect to the recording medium in a main scanning direction and in a sub scanning direction perpendicular to the main scanning direction with the ink jet heads mounted on the carriage and aligned in the sub scanning direction, a movement generating device that moves the carriage with respect to the recording medium, a print control device that controls the ink jet heads and movement device so that the ink droplets ejected from each of the ink jet heads overlap each other on the recording medium by performing ejection of ink using the ink jet heads while moving the carriage with respect to the recording medium...

Asano, paragraph [0014]. However, Asano is silent with respect to an image recording device comprising any ink which exhibits a transmission density of not less than 0.15 or an L value not less than 65, much less a second recording head which discharges a second ink for a second image forming process, wherein the second image forming process is a process for a background, and a layer of the second ink has a transmission density not less than 0.15 or an L value not less than 65, as claimed.

For at least the foregoing reasons, Applicants submit that Asano does not teach or suggest all of the limitations of present claim 1. Moreover, Asano provides no teaching or suggestion that would motivate one of ordinary skill in the art to modify the disclosed ink jet recording apparatus so as to incorporate the claimed second recording head, second image forming process, and second ink having the claimed transmission

density or L value. Thus, the rejection of claims 1, 2, 5, 8, 9, and 11-13 as unpatentable over Asano is improper, and should be withdrawn.

With respect to new claims 22-35, claims 22 and 23 depend, either directly or indirectly, from present claim 1. Thus, these claims are allowable over Asano for at least the reasons set forth above. With respect to new claims 24-35, these claims recite, *inter alia*,

An image recording device, comprising... a first recording head which discharges a first ink for first image forming process...wherein the first image forming process is a process for background, and a layer of the first ink has a transmission density not less than 0.16 or an L value not less than 65.

Claim 24. As argued above, Asano is silent with respect to an image recording device, comprising any ink which exhibits a transmission density of not less than 0.15 or an L value not less than 65. Thus, claims 24-35 are allowable over Asano for substantially the same reasons as set forth above.

c. §103(a) rejection in view of Asano and Fuqua

Claims 3, 4, 7, and 10 stand rejected under 35 U.S.C. §103(a) as unpatentable over Asano in view of Fuqua. Office Action at 5, 6. Insofar as this rejection applies to claim 4 it is moot, as claim 4 is cancelled herein. With respect to pending claims 3, 7, and 10, Applicants submit the following remarks.

As mentioned above, to establish a prima facie case of obviousness, the Examiner must show that the prior art teaches or suggests all of the claim limitations, and that there is some teaching or suggestion in the prior art to make the proposed modification. M.P.E.P. §2143. The Examiner has not met these requirements with respect to the combination of Asano and Fuqua, as discussed below.

As stated in section II(b) above, Asano is silent with respect to an image recording device comprising any ink which exhibits a transmission density of not less than 0.15 or an L value not less than 65, much less a second recording head which discharges a second ink for a second image forming process, wherein the second image forming process is a process for a background, and a layer of the second ink has a transmission density not less than 0.15 or an L value not less than 65, as claimed in claim 1. Fuqua does not cure this deficiency.

Fuqua discloses that in rotary screen printing processes, it is known to apply a layer of white ink over the surface of a black substrate prior to printing. Fuqua, column 3, lines 34-45. However, Fuqua is silent with respect to the use and/or necessity of such preliminary white layer with ink jet recording apparatus, such as the ink jet recording apparatus disclosed by Asano, and certainly does not teach or suggest that such a layer should be delivered by a second recording head that delivers a second ink, as claimed. Moreover, even if, *arguendo*, Fuqua is considered to teach the delivery of such a white layer via a second recording head delivering a second ink, Fuqua remains silent with respect to the transmission density and L value of the layer. Thus, Asano and Fuqua, either alone or in combination, fail to teach or suggest all of the elements of present claim 1, much less the further elements recited in claims 3, 7, and 10.

In addition, the Examiner has failed to establish that there is some teaching or suggestion in the references of record that would motivate one of ordinary skill to modify Asano in the manner asserted. As mentioned above, Asano is drawn to a ink jet printing apparatus, whereas Fuqua is drawn to screen printing processes. One of ordinary skill in the art would appreciate that ink jet printing and screen printing are

drastically different printing processes that have various different benefits and drawbacks. Thus, the mere fact that Fuqua teaches the use of a background white layer in a screen printing process would not have motivated one of ordinary skill in the art to utilize such a background layer with an ink jet recording apparatus, such as the apparatus disclosed by Asano.

For at least the foregoing reasons, the §103(a) rejection of claims 3, 4, 7, and 10 as unpatentable over Asano in view of Fuqua is improper, and should be withdrawn.

With respect to new claims 22-35, claims 22 and 23 depend, either directly or indirectly, from present claim 1. Thus, these claims are allowable over Asano in view of Fuqua for at least the reasons set forth above. With respect to claims 24-35, these claims recite, *inter alia*,

An image recording device, comprising... a first recording head which discharges a first ink for first image forming process...wherein the first image forming process is a process for background, and a layer of the first ink has a transmission density not less than 0.16 or an L value not less than 65.

Claim 24. As argued above, Asano is silent with respect to an image recording device, comprising any ink which exhibits a transmission density of not less than 0.15 or an L value not less than 65. Fuqua does not cure these deficiencies for the same reasons disclosed above. Thus, claims 24-35 are allowable over Asano and Fuqua for substantially the same reasons as set forth above.

d. §103(a) rejection of claim 6 in view of Asano and Manini

Claim 6 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Asano and Manini. Office Action, pages 6, 7. According to the Examiner, Asano teaches all of the limitations of claim 6, except for the claimed diameter of ink at 100%

conversion. *Id.* at 7. To correct this deficiency, the Examiner turns to Manini. *Id.*

Asserting that Manini teaches an ink jet apparatus employing the ink diameter recited in claim 6, the Examiner maintains that it would have been obvious to one of ordinary skill in the art to incorporate the teachings of Manini into Asano, for the purpose of attaining improved print quality. *Id.* Applicants respectfully disagree.

As mentioned above in section II(b), Asano is silent with respect to an image recording device comprising any ink which exhibits a transmission density of not less than 0.15 or an L value not less than 65, much less a second recording head which discharges a second ink for a second image forming process, wherein the second image forming process is a process for a background, and a layer of the second ink has a transmission density not less than 0.15 or an L value not less than 65, as claimed in claim 1. Manini does not cure this deficiency.

Specifically, even if, *arguendo*, the Examiner's contentions with respect to the teachings of Manini are true, the reference remains silent with respect to an image recording device having a second recording head that delivers a second ink, as claimed, wherein a layer of the second ink exhibits the claimed transmission density and/or L value. Thus, Asano and Manini, either alone or in combination, fail to teach all of the elements of claim 6. Accordingly, the §103(a) rejection of claim 6 is improper, and should be withdrawn.

With respect to new claims 22-35, claims 22 and 23 depend, either directly or indirectly, from present claim 1. Thus, these claims are allowable over Asano in view of Manini for at least the reasons set forth above. With respect to claims 24-35, these claims recite, *inter alia*,

An image recording device, comprising... a first recording head which discharges a first ink for first image forming process...wherein the first image forming process is a process for background, and a layer of the first ink has a transmission density not less than 0.16 or an L value not less than 65.

Claim 24. As argued above, Asano is silent with respect to an image recording device, comprising any ink which exhibits a transmission density of not less than 0.15 or an L value not less than 65. Manini does not cure these deficiencies for the substantially the same reasons disclosed above. Thus, claims 24-35 are allowable over Asano and Manini for substantially the same reasons as set forth above.

III. Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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